

12 August 2019

Attention: Caroline Evans
Project Manager
Great Kei Wind Farm

**AMENDMENT FOR THE APPROVED 140MW GREAT KEI WIND ENERGY FACILITY NEAR KOMGA, EASTERN CAPE:
 ECOLOGICAL SPECIALIST OPINION**

Dear Caroline

Great Kei Wind Power (Pty) Ltd. received an environmental authorisation for the Great Kei Wind Energy Facility (WEF) on farmland outside of Komga, in the Eastern Cape Province of South Africa. Since the authorisation, an amendment in the layout and turbine technology, which requires a Part 2 Amendment to the Great Kei WEF environmental authorisation, has been proposed. The proposed amendments (listed in Table 1) were assessed to determine impacts on the surrounding ecology of the site. In addition, an amendment of the final road width has been requested. Changes to the road width and turbine layout and technology includes:

Table 1. Proposed specification changes to the Great Kei Wind Energy Facility

	Currently authorised	Proposed amendment
Number of turbines	45	37
Rotor diameter	140m	Up to 140m
Rotor diameter	140m	Up to 175m
Blade length	75m	Up to 90m
Road width	Construction width is unspecified. Rehabilitated to an operational width of 5m	Road construction width of 14m. Rehabilitated to an operational width of 8m.

All other specifications as listed in the EIA will remain the same.

Sensitivity:

A new sensitivity map was developed that reflects the proposed amendments (as listed in Table 1) to the Great Kei WEF. The following observations were made when comparing the new layout in terms of the defined sensitive areas map (Figure 1) to the original layout and sensitive areas map (Figure 2) for Great Kei WEF.

- The new layout constitutes a better outcome in terms of overall impact due a reduced physical footprint.
- None of the new proposed turbine localities fall within the sensitive areas or the associated buffer.
- The amended layout and number of turbines reduces the need for connecting roads and therefore reduces the requirement for, and footprint of, road construction.

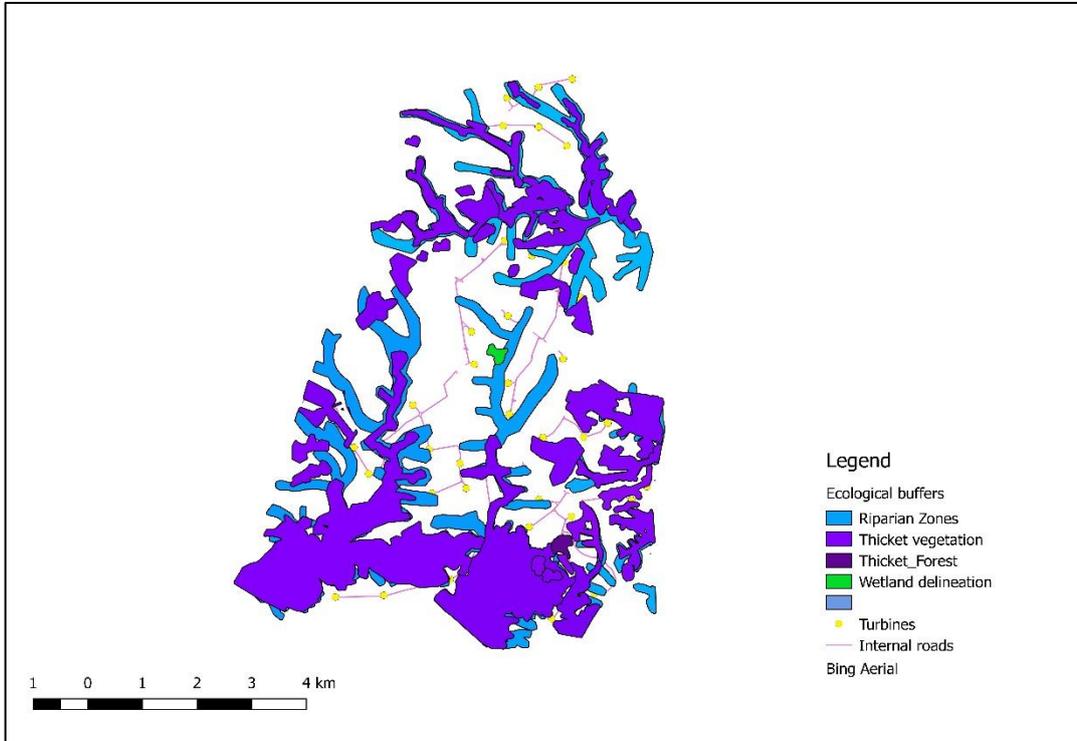


Figure 1. Sensitivity map reflecting the proposed amendments to the Great Kei WEF

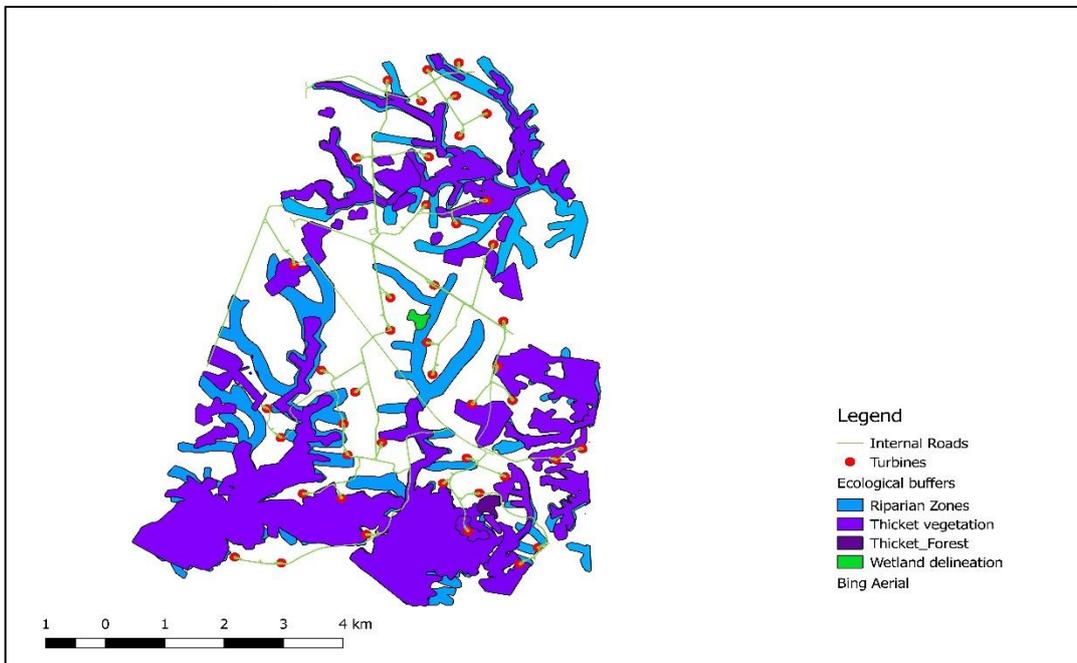


Figure 2. Sensitivity map of the original layout approved.

Ecological specialist comments:

The following comments are made to each change in specification as listed in Table 1:

Table 2. Comments on the proposed specification changes to the Great Kei WEF

Proposed new specifications	Effect on impacts and mitigation measures	Effect on current EA conditions	Effect on cumulative impacts	Notes on land-use changes
Number of turbines:				
The number of turbines will decrease from 45 to 37. Some of the turbine positions have changed or removed completely.	All mitigations identified in the original Ecological Report are still valid for this change. There are no additional mitigations proposed for this change.	All conditions listed in the EA are still valid for this change. There are no additional conditions proposed for this change.	The proposed amendment will have no additional cumulative impact on the ecological landscape and therefore no additional cumulative issues were identified. The reduction in turbine numbers will result in a decrease in potential loss of natural ecosystems to the tune of approx. 3ha (calculated at 0.35ha per turbine).	There have been no changes in land use that affect the impact assessment of the original or amended turbine layout.
Rotor diameter:				
Rotor diameter area are increased from 140m to 175m for each turbine.	All mitigations identified in the original Ecological Report are still valid for this change. There are no additional mitigations proposed for this change.	All conditions listed in the EA are still valid for this change. There are no additional conditions proposed for this change.	The proposed amendment will have no additional cumulative impact on the ecological landscape and therefore no additional cumulative issues were identified.	There have been no changes in land use that affect the impact assessment of the original or amended turbine layout.
Blade length:				

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Proposed new specifications	Effect on impacts and mitigation measures	Effect on current EA conditions	Effect on cumulative impacts	Notes on land-use changes
Blade length are increased from 75m to 87.5m for each turbine	<p>All mitigations identified in the original Ecological Report are still valid for this change.</p> <p>There are no additional mitigations proposed for this change.</p>	<p>All conditions listed in the EA are still valid for this change.</p> <p>There are no additional conditions proposed for this change.</p>	The proposed amendment will have no additional cumulative impact on the ecological landscape and therefore no additional cumulative issues were identified.	There have been no changes in land use that affect the impact assessment of the original or amended turbine layout.
Road width:				
Road width are increased from; unspecified during construction rehabilitated to 5m wide during operational to; 14m wide during construction, rehabilitated to 8m wide during operational.	<p>All mitigations identified in the original Ecological Report are still valid for this change.</p> <p>There are no additional mitigations proposed for this change.</p>	<p>All conditions listed in the EA are still valid for this change.</p> <p>There are no additional conditions proposed for this change.</p>	The cumulative impacts of ecosystem fragmentation is reduced by the number of turbines and a reduced road footprint, therefore the increase in the operational footprint and it's cumulative effect compared to the original proposal is no different.	There have been no changes in land use that affect the impact assessment of the original or amended turbine layout.

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Concluding remarks:

The proposed amendments to the 140MW Great Kei Wind Energy Facility will have no additional impact (direct, indirect or cumulative) on the ecology and ecosystems. Rather, the amended layout it will achieve a better outcome in terms of a reduced turbine and road footprint. No additional impacts or mitigation measures, associated with the proposed amendment were identified. Therefore the recommendations and mitigation measures contained in the Ecological Impact Assessment (2014) are still applicable, remain valid, and should be included as conditions for approval.

It is the opinion of the Ecological Specialist that overall, the significance of the impacts associated with 45 turbines, as assessed in the Ecological Impact Assessment (2014), has been significantly reduced as a result of the amended 37 turbine layout.

No additional No-Go areas were identified as a result of this amendment.

This Letter of Opinion is not a standalone document and the conclusions made must be read in conjunction with the findings of the original Ecological Impact Assessment (2014).

Yours faithfully



Greer Hawley
Ecological Specialist

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Dr Greer Hawley-McMaster has a BSc degree in Botany and Zoology, a BSc (Honours) in Botany from the University of Cape Town and a PhD (Microbiology) from Rhodes University. Greer has a diverse skill set including biodiversity surveys and assessments (plants, fungi and terrestrial ecosystems), developing environmental management policy (EMP's and EMF's), analysis and interpretation of environmental and biodiversity spatial datasets, training, feasibility assessments, environmental impact assessments for a wide range of land use activity proposals, aquaculture feasibility assessments,

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alien invasive management planning and conservation management planning. Greer has undertaken work in a number of African countries and has specifically surveyed many parts of the Eastern Cape. As a Principal Consultant, Greer manages large projects and has experience with co-ordinating big specialist teams. Greer has recently completed the review of the Eastern Cape Biodiversity Conservation Plan (2019) and continues to develop the Eastern Cape Biodiversity strategy and Action Plan.

Declaration:

I, Greer Hawley, declare that I am an independent consultant and have no business, financial, personal or other interest in the proposed development, application or appeal in respect of which I was appointed other than fair remuneration for work performed in connection with the activity, application or appeal. There are no circumstances that compromise the objectivity of my performing such work.

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